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10/580,757	05/26/2006	Horst Wild	4954PCT	8720
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EXAMINER				
YOUNG, EDWIN				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,757

Applicant(s)

WILD ET AL.

Examiner

EDWIN A. YOUNG

Art Unit

3655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 21-34 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 28 November 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date 11/28/2008
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

This action is responsive to the amendment filed 11/28/2008. Claims 1-20 have been cancelled and new claims 21-34 have been entered. Claims 21-34 are currently pending in this application.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 11/28/2008 has been considered by the examiner.

Drawings

The drawings were received on 11/28/2008. These drawings are unacceptable. New Figure 3 shows the vehicle encompassing the automatic gearbox and the control device containing software, which introduces new matter. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The original disclosure does not disclose the vehicle containing the control device (see previously presented claims 19 and 20). Figure 3 should be corrected by showing the vehicle encompassing the automatic gearbox only.

Specification

The abstract of the disclosure is objected to because it introduces new matter. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. Lines 5-6 state, "the motor revolution speed is increased or reduced in steps". The original disclosure only states that the revolution speed is increased or reduced in steps. The original disclosure does not provide support for a motor

revolution speed being increased or reduced in steps. Correction is required. See MPEP § 608.01(b).

The amendment filed 11/28/2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows (page numbers and lines refer to those of the amendment):

- Page 5, lines 8-9, "merely" has been changed to - -only- -. The word "only" excludes other possibilities from activating the stepped change of the revolution speed. The original disclosure of "merely" did not exclude such possibilities.
- Page 5, lines 23-24, "sportive driving" has been changed to - -the driver's desire or intention for sporty driving".
- Page 6, line 4, "an efficiency-oriented, sportive driving" has been changed to - -a driver's intention for a power-oriented, sporty driving".
- Page 6, lines 9-12 contains new references to retro-fitting or after-equipping the automatic gearbox.
- Page 6, lines 11-12, "can be upgraded by an update of the software" has been changed to - -simply by updating or changing the shift control software- -.
- Page 6, line 16, "state of the art" has been changed to - -newest state- -. A newest state is not necessarily a state of the art.

- All amendments which replaced "revolution speed" with "engine or motor revolution speed" introduce new matter, i.e. page 8 lines 1-2. The original disclosure is silent as to what the revolution speed is and therefore, applicant cannot amend the disclosure to now specify a specific revolution speed.
- Page 8, line 11, "has" has been changed to - -provides and maintains- -.
- Page 8, 14 contains the new phrase "or power".
- Page 11, line 23, contains the new phrase "virtual".
- Page 12, lines 2-3 contain the new phrases, "linear transmission" and "linear".
- The entire addition of page 12, lines 5-16 contains new matter. Applicant appears to be relying on Fig. 2 to provide support for a linear characteristic. However, the figures are not originally described in such a way and are not stated to be to scale. Therefore, applicant cannot introduce the linear expression into the specification.
- Page 12, lines 19-20, "below the minimal" has been changed to - -exceeding the maximum revolution speed- -.
- Page 12, line 27 introduces the new phrase "driving".

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 21-34 replace the original disclosure of "revolution speed" with either - - engine revolution speed- - or - -motor revolution speed- -, i.e. claim 21, line 5. The original disclosure is silent as to what the revolution speed is and therefore, applicant cannot amend the disclosure to now specify a specific revolution speed.

Claims 21 and 32-34 introduce the new limitation of a linear transmission ratio. Applicant appears to be relying on Fig. 2 to provide support for a linear characteristic. However, the figures are not originally described in such a way and are not stated to be to scale. Therefore, applicant cannot introduce the linear expression or equation into the claims.

Claim 21, lines 10-12 state, "revolution speed and a vehicle velocity of the motor vehicle are not directly proportional to one another". This is not supported by the original disclosure.

Claim 25 states seven steps are provided. The original disclosure only provides support for the range five to ten.

1The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 29 and 32-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 29, it is unclear what the phrase "a manner" is referring to.

Claim 32, lines 20-31 and claim 34, lines 12-25 appear to state that the transmission ratio is altered to achieve to the desired result. The original disclosure states that a revolution speed altering achieves the result. Therefore, it is unclear how claims 32 and 34 relate to the original disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-31 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by NOBUMOTO (US 5,947,861).

Regarding claim 21, NOBUMOTO discloses an automatic gearbox, for a motor vehicle, with infinitely-variable transmission ratio, which may be operated selectively in a constant speed mode in which a fixed value is prescribed for a desired nominal value of a motor revolution speed of a motor of the motor vehicle, and an acceleration mode in which the desired nominal value of the motor revolution speed can be increased or reduced in steps, characterized in that, in the acceleration mode the motor revolution

speed is increasable with a linear transmission ratio in which the motor revolution speed and a vehicle velocity of the motor vehicle are not directly proportional to one another. (See ABSTRACT; Figs. 1, 3 and 5-8; column 1, line 64 through column 2, line 45; column 4, lines 46-51 and column 5, lines 37-45).

Regarding claim 22, NOBUMOTO discloses that after an acceleration phase, a further stepped motor revolution speed increase or a stepped motor revolution speed reduction can be set dependent on a position of an accelerator pedal of the motor vehicle. (See Figs. 5-8 and column 1, line 64 through column 2, line 45; column 4, lines 46-51 and column 5, lines 37-45).

Regarding claim 23, NOBUMOTO discloses shifting steps for increasing or reducing the motor revolution speed are each respectively fixed as a respective characteristic line or characteristic field of motor revolution speed values and vehicle velocity values dependent on a position of an accelerator pedal of the motor vehicle or dependent on the vehicle velocity (see Figs. 5-8).

Regarding claim 24, NOBUMOTO discloses that in the acceleration mode up to achieving a maximum of the vehicle velocity, five to ten transmission ratio shifting steps are provided (see Fig. 7).

Regarding claim 25, NOBUMOTO discloses seven of the transmission ratio shifting steps are provided (see Fig. 7).

Regarding claim 26, NOBUMOTO discloses respective separate transmission ratio shifting steps are respectively specified for increasing and for reducing the motor revolution speed (see Figs. 5-7).

Regarding claim 27, NOBUMOTO discloses a minimum motor revolution speed and a maximum motor revolution speed are associated with a respective transmission ratio shifting step, and that when falling below or exceeding the minimum motor revolution speed or the maximum motor revolution speed a stepped motor revolution speed change can be triggered (see Figs. 5-7).

Regarding claim 28, NOBUMOTO discloses a stepped motor revolution speed change in the acceleration mode can be activated depending on a driving program that is selected (see column 5, lines 37-45).

Regarding claim 29 as best understood, NOBUMOTO discloses a stepped motor revolution speed change in the acceleration mode can be activated dependent on a manner in which the motor vehicle is driven (see column 5, lines 37-45).

Regarding claim 30 as best understood, NOBUMOTO discloses a control of a stepped motor revolution speed change is embodied in software in a control device (see Fig. 3).

Regarding claim 31, NOBUMOTO discloses a vehicle, characterized in that it comprises an automatic gearbox according to claim 21 (see Fig. 1 and column 1, lines 9-14).

Regarding claim 34 as best understood, NOBUMOTO discloses a motor vehicle that is adapted to drive at a variable vehicle speed, and that has a motor adapted to operate at a variable motor rotational speed, a continuously variable transmission connected for power transmission between said motor and at least one drive wheel of said motor vehicle adapted to drive at said vehicle speed, and a transmission controller

including a memory storing a control program adapted to control continuously variable adjustments of a transmission ratio of said transmission between said motor rotational speed of said motor and said vehicle speed of said drive wheel, an improvement wherein said control program is embodied such that, in at least one operating mode, said transmission ratio is to be adjusted in discrete discontinuous steps of said motor rotational speed between successive transmission ratio ranges that respectively have linear transmission ratio characteristics of said motor rotational speed relative to said vehicle speed, and at least one of said linear transmission ratio characteristics is defined as $n = mv + b$, wherein n is said motor rotational speed, v is said vehicle speed, m is an apparent virtual transmission ratio, and b is an apparent virtual positive or negative offset value of said motor rotational speed for a zero value of said vehicle speed in said at least one said linear transmission ratio characteristic. (See ABSTRACT; Figs. 1, 3 and 5-8; column 1, line 64 through column 2, line 45; column 4, lines 46-51 and column 5, lines 37-45).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over NOBUMOTO (US 5,947,861) in view of OSANAI (US 4,704,683).

Regarding claim 32 as best understood, NOBUMOTO discloses a continuously variable transmission for a motor vehicle that can drive at a variable vehicle speed and that has a drive motor which can operate at a variable motor rotational speed, said transmission comprising a controller wherein said controller comprises a memory storing a control program adapted to control said control device so as to adjust said transmission ratio in discrete discontinuous steps of said motor rotational speed between successive transmission ratio ranges that each respectively have a respective linear transmission ratio characteristic of said motor rotational speed relative to said vehicle speed, and wherein said motor rotational speed and said vehicle speed are not directly proportional to each other in at least one said linear transmission ratio characteristic (see ABSTRACT; Figs. 1, 3 and 5-8; column 1, line 64 through column 2, line 45; column 4, lines 46-51 and column 5, lines 37-45). However, NOBUMOTO does not disclose the transmission comprising a variator comprising an adjustable primary cone pulley; an adjustable secondary cone pulley; and a force transmission element linking said primary cone pulley to said secondary cone pulley for force transmission therebetween; said controller comprising a control device connected to and adapted to adjust said primary cone pulley and said secondary cone pulley so as to adjust a transmission ratio therebetween through said force transmission element continuously between a lowest transmission ratio and a highest transmission ratio.

OSANAI discloses a transmission comprising a variator comprising an adjustable primary cone pulley; an adjustable secondary cone pulley; and a force transmission element linking said primary cone pulley to said secondary cone pulley for force

transmission therebetween; said controller comprising a control device connected to and adapted to adjust said primary cone pulley and said secondary cone pulley so as to adjust a transmission ratio therebetween through said force transmission element continuously between a lowest transmission ratio and a highest transmission ratio (see Fig. 2).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to replace the toroidal CVT of NOBUMOTO with the variator CVT of OSANAI to provide a transmission comprising a variator comprising an adjustable primary cone pulley; an adjustable secondary cone pulley; and a force transmission element linking said primary cone pulley to said secondary cone pulley for force transmission therebetween; said controller comprising a control device connected to and adapted to adjust said primary cone pulley and said secondary cone pulley so as to adjust a transmission ratio therebetween through said force transmission element continuously between a lowest transmission ratio and a highest transmission ratio, in light of the teachings of OSANAI, since replacing one known element for another known equivalent element yields predictable results.

Regarding claim 33 as best understood, NOBUMOTO discloses at least one said linear transmission ratio characteristic is defined as $n = mv + b$, wherein n is said motor rotational speed, v is said vehicle speed, m is an apparent virtual transmission ratio, and b is an apparent virtual positive or negative offset value of said motor rotational speed for a zero value of said vehicle speed in said at least one said linear transmission ratio

characteristic (see ABSTRACT; Figs. 1, 3 and 5-8; column 1, line 64 through column 2, line 45; column 4, lines 46-51 and column 5, lines 37-45).

Response to Arguments

Applicant's arguments filed 11/28/2008 have been fully considered but they are not persuasive.

Regarding the linear characteristic of Fig. 2, applicant states that the extended line of the line segments does not pass through the origin of the n-v graph. In addition to the rejections and comments above, it is noted that applicant's Fig. 2 does not appear to show this feature. Fig. 2 appears to show the extended line portions passing through the origin.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWIN A. YOUNG whose telephone number is (571)272-4781. The examiner can normally be reached on M-TH 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. A. Y./
Examiner, Art Unit 3655

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